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Scientists discover 'excessive drinking' gene

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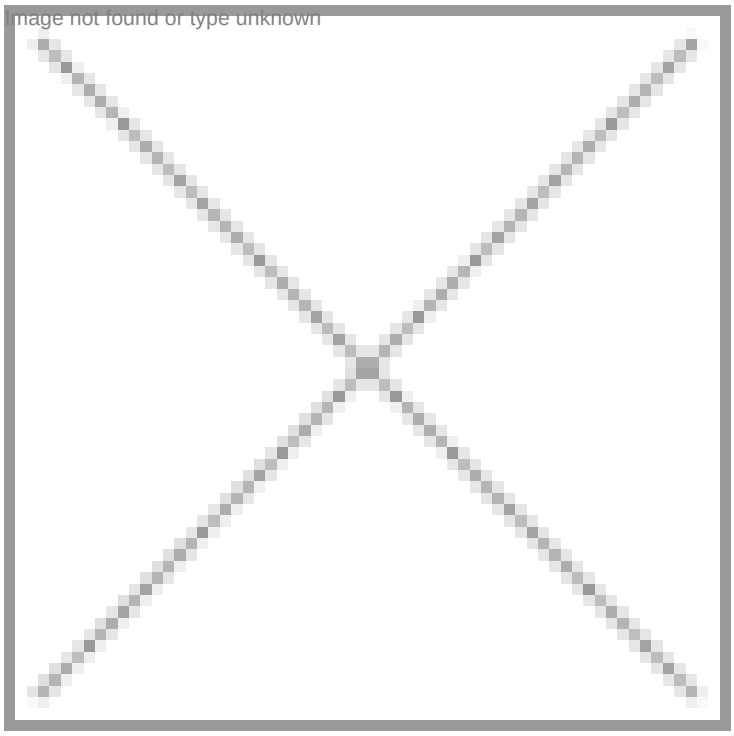

Singapore: A team of researchers led by Professor Howard Thomas from Imperial College London have identified the mutated gene Gabrb 1 that has been seen to change alcohol preference very strongly.

The team introduced subtle mutations into the genetic code at random throughout the genome and tested mice for alcohol preference. The study led them to the discovery that the mice carrying this mutation were willing to work for the alcohol and continued to drink consistently more than normal mice over long periods of time. They consumed alcohol for almost 85 percent of their daily fluid intake.

The researchers tracked down the cause of this excessive drinking to a single point mutation in the Gabrb1 gene, which codes for the beta 1 subunit, an important component of the GABAA receptor in the brain. It is this receptor that responds to the brain's most important chemical messenger (GABA), in charge of regulating brain activity.

Researchers found that the gene mutation caused the receptor to activate spontaneously even when the usual GABA trigger was not present.

"It is amazing to think that a small change in the code for just one gene can have such profound effects on complex behaviours like alcohol consumption. We are continuing our work to establish whether the gene has a similar influence in humans, though we know that, in people, alcoholism is much more complicated as environmental factors come into play. But there is the real potential for this to guide development of better treatments for alcoholism in the future," said Dr Quentin Anstee, consultant hepatologist at Newcastle University and joint lead author.